

CIRCUITS AND TECHNIQUES  
FOR CHARGING CAPACITIVE LOADS

Abstract of the Invention

5       The present invention provides a capacitor charging circuit that efficiently charges capacitive loads. In particular, circuits and techniques are preferably provided for using current from both the primary and secondary windings of a transformer to  
10      control ON-time and OFF-time of a switch. This arrangement preferably yields an adaptable ON-time and adaptable OFF-time switch that is capable of rapidly charging capacitor loads ranging from as low as zero volts to several hundred volts. The output voltage is  
15      preferably measured indirectly to prevent unnecessary power consumption. In addition, control circuitry can be provided to conserve power by ceasing the delivery of power to the capacitor load once the desired output voltage is reached. Control circuitry preferably  
20      operates an interrogation timer that periodically activates the power delivery cycle to maintain the capacitor output load in a constant state of readiness.